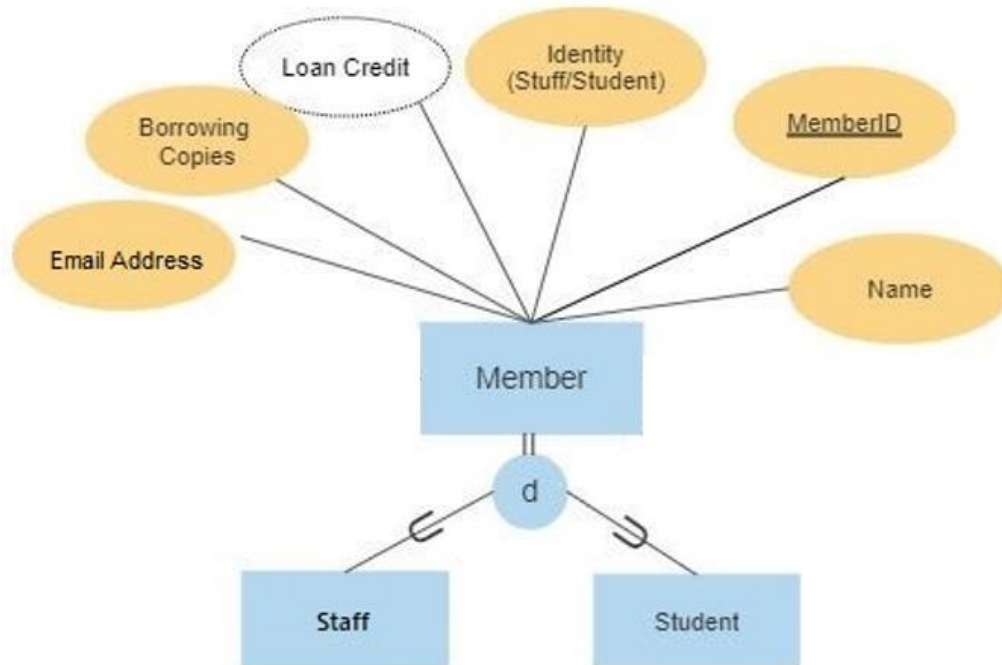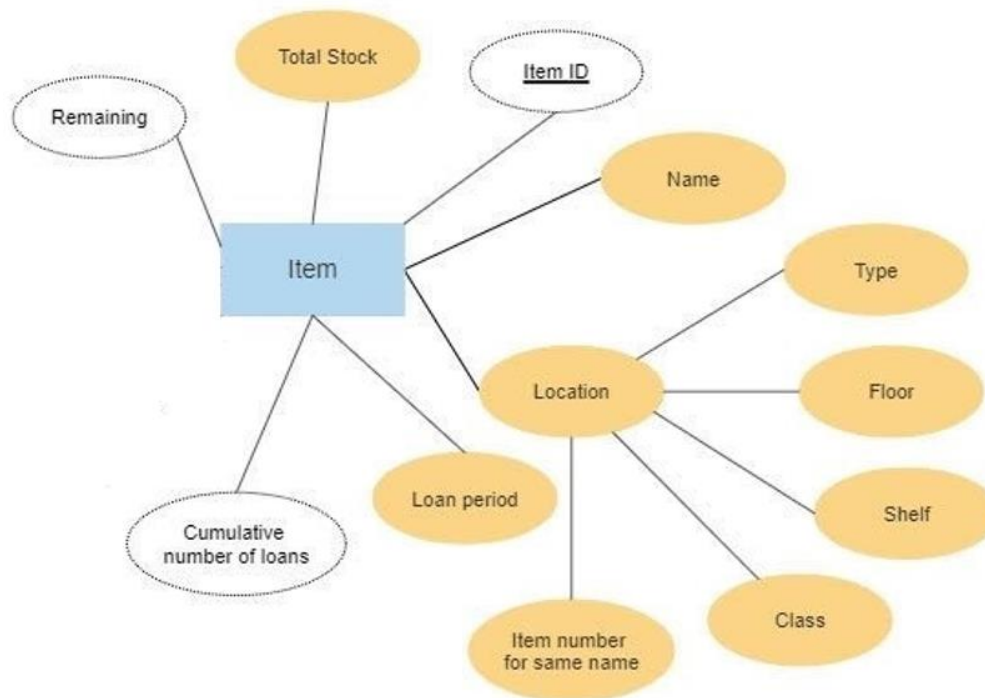# I. Entities

1.Member

- Create a table for the entity set: Member
- Make each attribute of the entity set a field of the table, with an appropriate type.
- Declare the field or fields comprising the primary key : MemberID

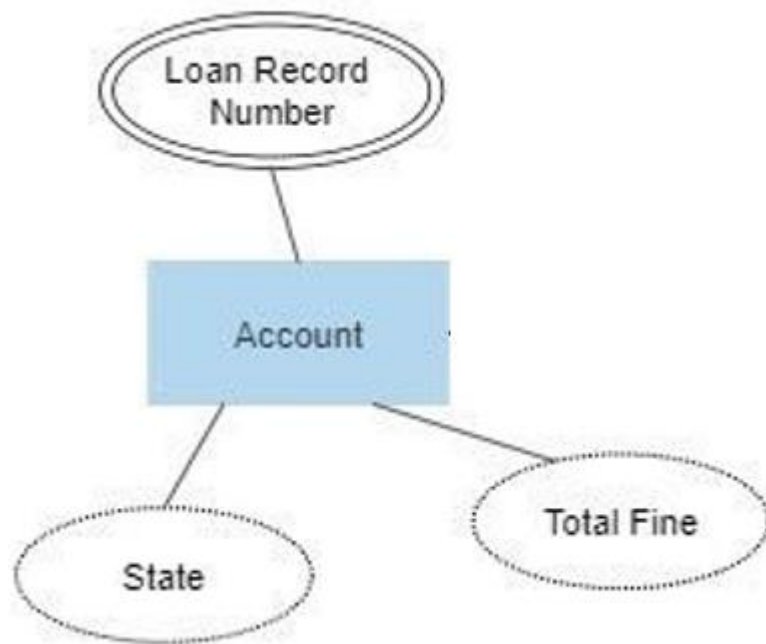| Member		
PK Member_ID	Simple
Name	Simple
Identity	Simple
Email Address	Simple
Loan_Credit	Derived
Borrowing_Copies	Simple

2.Items

- Create a table for the entity set: Items
- Make each attribute of the entity set a field of the table, with an appropriate type. Location is a composite attribute contains Floor, Shelf and Class.
- Declare the field or fields comprising the primary key : ITEM_ID

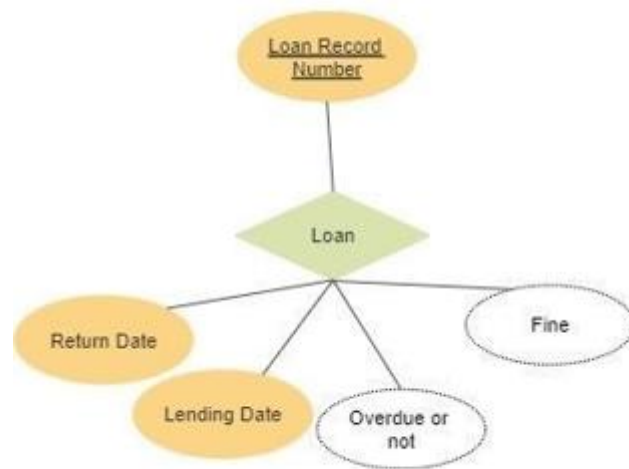| Item		
PK	Item_ID	Simple
	Name	Simple
	Type	Simple
	Floor	
	Shelf	Composite
	Class	
	Item_number_for_same_name	Simple
	Total_Stock	Simple
	Loan_period	Simple

3.Account

- Create a table for the entity set: Account
- Make each attribute of the entity set a field of the table, with an appropriate type.
- Declare the field or fields comprising the primary key : MEMBER_ID

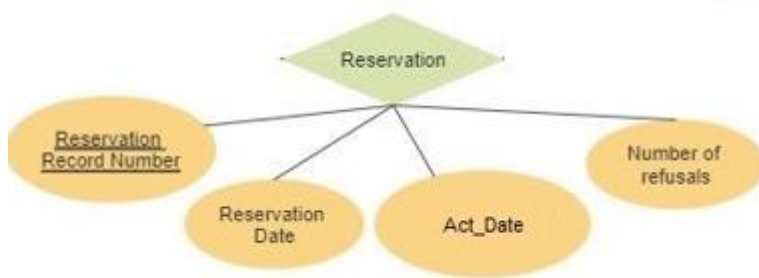| Account		
FK	**Member_ID**	Simple
	Total_Fine	Derived
FK	**Loan_Record_Number**	Simple
	State	Simple

II.RELATIONS

1.Loan

• Create a table for the relationship set: Loan
• Add all primary keys of the participating entity sets as fields of the table:
   MemberID and ItemID
• Add a field for each attribute of the relationship.
• A primary key called Loan_Record_Number is generated.
• Declare foreign key constraints for all the fields from the source and target entity sets: MemberID and ItemID

	Loan	
PK	Loan_Record_Number	Simple
FK	Member_ID	Simple
FK	Item_ID	Simple
	Lending_Date	Simple
	Return_Date	Simple
	Overdue	Derived
	Fine	Derived

2.Reservation

• Create a table for the relationship set: Reservation
• Add all primary keys of the participating entity sets as fields of the table:
  MemberID and ItemID
• Add a field for each attribute of the relationship.
• A primary key called Reservation_Record_Number is generated.
• Declare foreign key constraints for all the fields from the source and target entity sets:
MemberID and ItemID

	Reservation	
PK	Reservation_Record_Number	Simple
FK	Member_ID	Simple
FK	Item_ID	Simple
	Reservation_Date	Simple
	Act_Date	Simple
	Number_of_refusals	Simple